

## EFFECT OF TEMPERATURE ON LONGEVITY OF *ODOIPORUS LONGICOLLIS* (OLIV.) (COLEOPTERA: CURCULIONIDAE)<sup>1</sup>

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Since insects are poikilotherms, temperature plays an important role in their behavioral as well as physiological activities. *Odoiporus longicollis*, the banana pest, lives inside longitudinal tunnels made by them in the banana pseudostem (Shukla and Kumar, 1970). For the study of several physiological aspects in relation to temperature, maximum and minimum temperatures for the survival of this insect in laboratory must be known. The present paper deals with the survival of this insect at different temperatures to find out the most suitable temperature range for culture.

Adults of *O. longicollis* were collected from the banana gardens at Campierganj, Gorakhpur (Uttar Pradesh, India). Batches of 10 insects were kept at different temperatures in petridishes with some pieces of banana pseudostem.

At 0°C it was observed that insects cease activity within five minutes, go into cold paralysis and die after thirty minutes. At 6 – 9°C they are feebly active and die after twelve to thirteen days. At 10 – 15°C the insects are comparatively more active than at previous temperatures and die after twenty five to twenty six days. The temperature range between 17-27°C was found to be most suitable for normal activities. At 30-35°C they show increased activity, moving fast in the petridish and die after four to five days. They manifest great restlessness at 37 – 41°C for about eleven to twelve hours after which they die. At 42-45°C they go into heat paralysis after 15 minutes and die after thirty minutes. Above this temperature they die within ten to fifteen minutes.

In the cowpea aphid, *Aphis craccivora*, greatest longevity was recorded at 12.8°C (Radke, *et al.*, 1973). Nieschulz (1933) observed normal activity in *Musca domestica* at 15 – 22.5°C and in *Fannia canalicularis* at 22 – 32°C. Since *O. longicollis* shows normal activity at 17 – 27°C, this is about in between the two flies, *M. domestica* and *F. canalicularis*.

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